



IPW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hugh R. Sharkey et al.                      Art Unit : 3762  
Serial No. : 10/712,006                                      Examiner : Unknown  
Filed : November 14, 2003  
Title : METHOD FOR TREATING INTERVERTEBRAL DISC

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

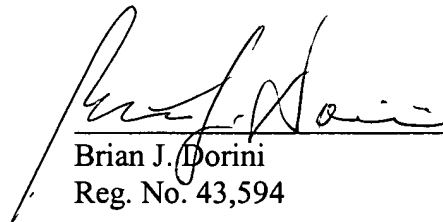
INFORMATION DISCLOSURE STATEMENT

Copies of the references listed on the attached form PTO-1449 are enclosed. The references relate to the litigation disclosed in an IDS filed March 31, 2004. If the Examiner would like any additional documents relating to the litigation, he is encouraged to contact the undersigned.

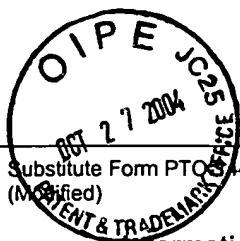
This statement is being filed within three months of the filing date of the application or before the receipt of a first Office Action on the merits. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: October 26, 2004

  
\_\_\_\_\_  
Brian J. Dorini  
Reg. No. 43,594

Fish & Richardson P.C.  
1425 K Street, N.W.  
11th Floor  
Washington, DC 20005-3500  
Telephone: (202) 783-5070  
Facsimile: (202) 783-2331



|   |  |  |                                      |
|---|--|--|--------------------------------------|
| <b>Substitute Form PTO-1449</b><br>(Modified)<br><b>Information Disclosure Statement</b><br><b>by Applicant</b><br>(Use several sheets if necessary)<br><br>(37 CFR §1.98(b)) | <b>U.S. Department of Commerce</b><br><b>Patent and Trademark Office</b> | <b>Attorney's Docket No.</b><br>14170-038006 | <b>Application No.</b><br>10/712,006 |
|   | <b>Applicant</b><br>Hugh R. Sharkey et al.                               |  |                                      |
|   | <b>Filing Date</b><br>November 14, 2003                                  | <b>Group Art Unit</b><br>3762                |                                      |

**U.S. Patent Documents**

| Examiner Initial | Desig. ID | Document Number | Publication Date | Patentee         | Class | Subclass | Filing Date If Appropriate |
|------------------|-----------|-----------------|------------------|------------------|-------|----------|----------------------------|
|                  | AA        | Re. 33,258      | 07/10/1990       | Onik et al.      |       |          |                            |
|                  | AB        | 4,863,430       | 09/05/1989       | Klyce et al.     |       |          |                            |
|                  | AC        | 5,084,043       | 01/28/1992       | Hertzmann et al. |       |          |                            |
|                  | AD        | 5,195,541       | 03/23/1993       | Obenchain        |       |          |                            |
|                  | AE        | 5,285,795       | 02/15/1994       | Ryan et al.      |       |          |                            |
|                  | AF        | 5,313,962       | 05/24/1994       | Obenchain        |       |          |                            |
|                  | AG        | 5,948,008       | 09/07/1999       | Daikuzono        |       |          |                            |
|                  | AH        | 5,976,105       | 11/02/1999       | Marcove et al.   |       |          |                            |

**U.S. Patent Documents**

| Examiner Initial | Desig. ID | Document Number | Publication Date | Patentee | Class | Subclass | Filing Date If Appropriate |
|------------------|-----------|-----------------|------------------|----------|-------|----------|----------------------------|
|------------------|-----------|-----------------|------------------|----------|-------|----------|----------------------------|

**Foreign Patent Documents or Published Foreign Patent Applications**

| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation |    |
|------------------|-----------|-----------------|------------------|--------------------------|-------|----------|-------------|----|
|                  |           |                 |                  |                          |       |          | Yes         | No |
|                  | AI        | 2 012 388       | 05/15/1994       | Russia                   |       |          | Yes         |    |
|                  | AJ        |                 |                  |                          |       |          |             |    |

**Other Documents (include Author, Title, Date, and Place of Publication)**

| Examiner Initial | Desig. ID | Document  |
|------------------|-----------|---|
|                  | AK        | Surgical Dynamics, "Discography System For Contemporary Spine Surgery," copyright 1991 (2 pages).   |
|                  | AL        | Surgical Dynamics, "Nucleotome System Automated Percutaneous Lumbar Discectomy" (3 pages).  |
|                  | AM        | Surgical Dynamics, "Nucleotome Flex II For Automated Percutaneous Lumbar Discectomy," copyright 1992 (2 pages).   |
|                  | AN        | Surgical Dynamics, "Surgical Technique Nucleotome Flex II for Automated Percutaneous Lumbar Discectomy," copyright 1992 (21 pages).                           |
|                  | AO        | Surgical Dynamics, "Nucleotome Micro I For Automated Open Lumbar Discectomy," copyright 1992 (2 pages).   |
|                  | AP        | Surgical Dynamics, "Surgical Technique Nucleotome Micro I for Automated Open Lumbar Discectomy," copyright 1992 (4 pages).                                    |
|                  | AQ        | Bernhardt, et al., "Magnetic Resonance Imaging Analysis of Percutaneous Discectomy: A Preliminary Report," <i>Spine</i> , 18(2):211-217 (Feb 1993)            |
|                  | BA        | Capanna, A. et al., "Lumbar Discectomy-Percentage of disc removal and detection of anterior annulus perforation," <i>Spine</i> , 6(6): 610-614 (Nov/Dec 1981) |

|  |                        |
|--|------------------------|
| <b>Examiner Signature</b>  | <b>Date Considered</b> |
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |                        |

|  |  |  |                                      |
|--|--|--|--------------------------------------|
| Substitute Form PTO-1449<br>(Modified)<br><br><b>Information Disclosure Statement<br/>by Applicant</b><br>(Use several sheets if necessary)<br><br>(37 CFR §1.98(b)) | U.S. Department of Commerce<br>Patent and Trademark Office | Attorney's Docket No.<br><b>14170-038006</b> | Application No.<br><b>10/712,006</b> |
|  | Applicant<br><b>Hugh R. Sharkey et al.</b>                 |  |                                      |
|  | Filing Date<br><b>November 14, 2003</b>                    | Group Art Unit<br><b>3762</b>                |                                      |

| Other Documents (include Author, Title, Date, and Place of Publication) |           |  |
|---|-----------|--|
| Examiner Initial  | Desig. ID | Document   |
|   | BB        | Castro, et al., "Restriction of Indication for Automated Percutaneous Lumbar Discectomy Based on Computed Tomographic Discography," <u>Spine</u> , 17(10):1239-1243 (Oct 1992)       |
|   | BC        | Cooney, "Percutaneous Lumbar Discectomy," <u>Clinics in Sports Medicine</u> , 12(3):557-568 (July 1993)  |
|   | BD        | Davis, G.W. et al., "Automated Percutaneous Discectomy," <u>Spine</u> , 16(3):359-363, (March 1991)  |
|   | BE        | Day, P.L., "Lateral Approach For Lumbar Diskogram And Chemonucleolysis," <u>Clinical Orthopaedics and Related Research</u> , No. 67 (Nov/Dec 1969)                                   |
|   | BF        | Garvin, P., et al., "Chymopapain: A Pharmacologic And Toxicologic Evaluation In Experimental Animals," Meeting of the Chicago Orthopedic Society, pp. 204-223 (May 10, 1963)         |
|   | BG        | Gunzburg, et al., "An Experimental Study Comparing Percutaneous Discectomy with Chemonucleolysis," <u>Spine</u> 18(2):218-226 (Feb. 1993)  |
|   | BH        | Jacobson, "Lumbar Percutaneous Discectomy," <u>Bulletin of the Hospital for Joint Diseases Orthopaedic Institute</u> , Vol. 48, no. 1 (1988)   |
|   | BI        | Kahanovitz, et al., "A Multicenter Analysis of Percutaneous Discectomy," <u>Spine</u> , 15(7):713-715 (July 1990)  |
|   | BJ        | Kambin, et al., "Arthroscopic Microdiscectomy versus Nucleotomy Techniques," <u>Clinics in Sports Medicine</u> , 12(3):587-598 (July 1993)   |
|   | BK        | Kambin, et al., "Development of Degenerative Spondylosis of the Lumbar Spine After Partial Discectomy," <u>Spine</u> , 20(5):599-607 (March 1, 1995)                                 |
|   | BL        | Kambin, et al., "History and Current Status of Percutaneous Arthroscopic Disc Surgery," <u>Spine</u> , 21(245):575-615 (Dec. 15, 1996)   |
|   | BM        | Kambin, et al., "Percutaneous Posterolateral Discectomy: Anatomy and Mechanism," <u>Clinical Orthopaedics and Related Research</u> , No. 223 (Oct. 1987)                             |
|   | BN        | Kaufman, H. et al., "Mechanical Aspiration Of Hematomas In An In Vitro Model," <u>Neurosurgery</u> , 25(3): 347-350 (Sept. 1989)   |
|   | BO        | Kornberg, "Automated Percutaneous Lumbar Discectomy as Treatment for Lumbar Disc Disruption," <u>Spine</u> , 18(3):395-397 (March 1993)  |
|   | BP        | Koutrouvelis, et al., "Stereotactic Percutaneous Lumbar Discectomy," <u>Neurosurgery</u> , 32(4):582-586 (April 1993)  |
|   | BQ        | Liebler, "Percutaneous Laser Disc Decompression: Clinical Experience with the Nd:YAG and KTP Lasers," <u>Spine: State of the Art Reviews</u> , 7(1):55-65 (Jan. 1993)                |
|   | BR        | Lorenz, M. et al., "Chemonucleolysis for Herniated Nucleus Pulposus In Adolescents," <u>Journal of Bone and Joint Surgery</u> , 67-A(9): 1402-1404 (Dec. 1985)                       |
|   | BS        | Maroon, J. et al., "Percutaneous Automated Discectomy: A New Method For Lumbar Disc Removal, Technical Note," <u>Journal of Neurosurgery</u> , 66(1): 143-146 (Jan. 1987)            |
|   | BT        | Maroon, J. et al., "Percutaneous Automated Discectomy, A New Approach To Lumbar Surgery," <u>Clinical Orthopaedics and Related Research</u> , No. 238, pp. 64-70 (Jan. 1989)         |
|   | BU        | Maroon, et al., "Percutaneous Discectomy for Lumbar Disc Herniation," <u>Neurosurgery Clinics of North America</u> , 4(1):125-134 (Jan 1993)   |
|   | BV        | Mayer, et al., "Percutaneous Endoscopic Laser Discectomy (PELD): A New Surgical Technique for Non-sequestered Lumbar Discs," <u>Acta Neurochirurgica</u> , Supp 54, pp. 53-58 (1992) |
|   | CA        | Mayer, "Spine Update: Percutaneous Lumbar Disc Surgery," <u>Spine</u> , 19(23):2719-2723, (Dec. 1994)  |

|  |                 |
|--|-----------------|
| Examiner Signature   | Date Considered |
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |                 |

|   |  |  |                                      |
|---|--|--|--------------------------------------|
| Substitute Form PTO-1449<br>(Modified)  | U.S. Department of Commerce<br>Patent and Trademark Office | Attorney's Docket No.<br><b>14170-038006</b> | Application No.<br><b>10/712,006</b> |
| <b>Information Disclosure Statement<br/>by Applicant</b><br>(Use several sheets if necessary) |  | Applicant<br><b>Hugh R. Sharkey et al.</b>   |                                      |
|   |  | Filing Date<br><b>November 14, 2003</b>      | Group Art Unit<br><b>3762</b>        |
| (37 CFR §1.98(b))   |  |  |                                      |

| <b>Other Documents (include Author, Title, Date, and Place of Publication)</b>   |              |   |
|--|--------------|---|
| Examiner<br>Initial  | Desig.<br>ID | Document  |
|  | CB           | Mochida, et al., "Percutaneous Nucleotomy in Lumbar Disc Herniation: A Prospective Study," <u>Spine</u> , 18(14):2063-2068 (Oct. 15, 1993)  |
|  | CC           | O'Laoire, S., et al., "Spinal Cord Compression Due To Prolapse Of Cervical Intervertebral Disc (Herniation Of Nucleus Pulposus)," <u>Journal of Neurosurgery</u> , 59, pp. 847-53 (1983)                    |
|  | CD           | Onik, G., et al., "Percutaneous Lumbar Discectomy Using A New Aspiration Probe: Porcine And Cadaver Model," <u>Radiology</u> , 155(1): 251-252 (Apr. 1985)  |
|  | CE           | Onik, G., et al., "Percutaneous Lumbar Discectomy Using A New Aspiration Probe: Preliminary Results," [Journal of clinical and laboratory research,] <u>Investigative Radiology</u> , 20(6):S18 (Sept 1985) |
|  | CF           | Onik, G., et al., "Percutaneous Lumbar Discectomy Using A New Aspiration Probe," <u>American Journal of Roentgenology</u> , 144:1137-1140 (June 1985)   |
|  | CG           | Onik, G., et al., "Automated Percutaneous Discectomy: Initial Patient Experience Work In Progress," <u>Radiology</u> , 162(1): 129-132 (Jan. 1987)  |
|  | CH           | Onik, G., et al., "Automated Percutaneous Discectomy at the L5-S1 Level: Use of a Curved Cannula," <u>Clinical Orthopaedics and Related Research</u> , No. 238, pp. 71-76 (Jan. 1989)                       |
|  | CI           | Onik, G., et al., "Automated Percutaneous Discectomy: A Prospective Multi-Institutional Study," <u>Neurosurgery</u> , 26(2):228-233 (Feb. 1990)   |
|  | CJ           | Patsiaouras, et al., "Percutaneous Nucleotomy: An Anatomic Study of the Risks of Root Injury," <u>Spine</u> , 16(1):39-42 (Jan. 1991)   |
|  | CK           | Plancarte et al., "Complex Regional Pain Syndrome Type 2 (Causalgia) After Automated Laser Discectomy: A Case Report," <u>Spine</u> , 22(4):459-462, (Feb. 15, 1997)  |
|  | CL           | Quigley, et al., "Laser Discectomy: A Review," <u>Spine</u> 19(1):53-56 (Jan. 1, 1993)  |
|  | CM           | Quigley, et al., "Percutaneous Laser Discectomy with the Ho:YAG Laser," <u>Lasers in Surgery and Medicine</u> , 12(6):621-624 (1992)  |
|  | CN           | Revel, et al., "Automated Percutaneous Lumbar Discectomy Versus Chemonucleolysis in the Treatment of Sciatica: A Randomized Multicenter Trial," <u>Spine</u> , 18(1):1-7 (Jan. 1993)                        |
|  | CO           | Shevlin, W. et al., "Perforation of the Anterior Annulus During Lumbar Discectomy," <u>Journal of Neurosurgery</u> , Vol. 38, No. 4, pp. 514-515 (Apr. 1973)  |
|  | CP           | Sluijter, et al., "Letter To The Editor," <u>Spine</u> , 21(4):528-529 (Feb. 15, 1996)  |
|  | CQ           | Smith, L. et al., "Enzyme Dissolution Of The Nucleous Pulposus," <u>Nature</u> , Vol. 198, pp. 1311-1312 (1963)   |
|  | CR           | Smith, L. et al., "Enzyme Dissolution Of The Nucleous Pulposus In Humans," <u>JAMA</u> , 187(2):177-180 (Jan 1964)  |
|  | CS           | Smith, L. et al., "Treatment of Lumbar Intervertebral Disc Lesions By Direct Injection Of Chymopapain," <u>Journal of Bone and Joint Surgery</u> , 49B(3): 502-519 (Aug 1967)                               |
|  | CT           | Sussman, B., "Intervertebral Discolysis With Collagenase," <u>Journal of the National Medical Association</u> , 60(3): 184-187 (May 1968)   |
|  | CU           | Sussman, B. et al., "Experimental Intervertebral Discolysis With Collagenase," <u>Journal of Neurosurgery</u> , 31: 628-635 (Dec. 1969)   |
|  | CV           | Sussman, B., "Inadequacies and Hazards Of Chymopapain Injections As Treatment For Intervertebral Disc Disease," <u>Journal of Neurosurgery</u> , 42: 389-396 (Apr. 1975)                                    |
|  | DA           | Ulrich, "Automatisierte perkutane Nukleotomie," <u>Zeitschrift für Orthopaedie und Ihre Grenzgebiete</u> ,  |
| Examiner Signature   |              | Date Considered   |
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |              |   |

|   |  |                                       |                               |
|---|--|---------------------------------------|-------------------------------|
| Substitute Form PTO-1449<br>(Modified)  | U.S. Department of Commerce<br>Patent and Trademark Office | Attorney's Docket No.<br>14170-038006 | Application No.<br>10/712,006 |
| <b>Information Disclosure Statement<br/>by Applicant</b><br>(Use several sheets if necessary) |  | Applicant<br>Hugh R. Sharkey et al.   |                               |
|   |  | Filing Date<br>November 14, 2003      | Group Art Unit<br>3762        |
| (37 CFR §1.98(b))   |  |                                       |                               |

| Other Documents (include Author, Title, Date, and Place of Publication) |           |   |
|---|-----------|---|
| Examiner Initial  | Desig. ID | Document  |
|   |           | No. 130, pp. 45-50 (Jan/Feb 1992)   |
|   | DB        | van Kleef, M., et al., "Percutaneous Intradiscal Radio-Frequency Thermocoagulation In Chronic Non-Specific Low Back-Pain," <u>The Pain Clinic</u> , 9(3):259-268 (1996)   |
|   | DC        | Williams, R., "Microlumbar Discectomy, A Conservative Surgical Approach To The Virgin Herniated Lumbar Disc," <u>Spine</u> , 3(2): 175-182 (June 1978)  |
|   | DD        | Yeo, et al., "Clinical Experience with Automated Percutaneous Discectomy," <u>Singapore Medical Journal</u> , 34(4):313-315 (Aug. 1993)   |
|   | DE        | Yeung, A., "Considerations for Use of the KTP Laser for Disc Decompression and Ablation," <u>Spine: State of the Art Reviews</u> , 7(1): 67-93 (Jan 1993)   |
|   | DF        | Yeung, A., "The evolution of Percutaneous Spinal Endoscopy And Discectomy: State Of The Art," <u>The Mount Sinai Journal of Medicine</u> , 67(4): 327-332 (Sept 2000)   |
|   | DG        | Zhou, et al., "Percutaneous Lumbar Discectomy Using a New Nucleotome System: Report of 182 Cases," <u>Chinese Medical Journal</u> , 106(6):446-451 (June 1993)  |
|   | DH        | "ArthroCare's Opening <i>Markman</i> Brief Regarding U.S. Patent Nos. 5,980,504 and 6,261,311," filed in U.S. District Court for the Western District of Tennessee Western Division on February 20, 2004, 31 pages  |
|   | DI        | "Smith & Nephew's Opening <i>Markman</i> Brief for U.S. Patent Nos. 5,980,504 and 6,261,311," filed in U.S. District Court for the Western District of Tennessee Western Division on February 20, 2004, 23 pages  |
|   | DJ        | "ArthroCare Corporation's Brief in Opposition to Smith & Nephew's Opening <i>Markman</i> Brief for U.S. Patent Nos. 5,980,504 and 6,261,311," filed in U.S. District Court for the Western District of Tennessee Western Division on March 26, 2004, 21 pages |
|   | DK        | "Smith & Nephew Inc.'s Opposition <i>Markman</i> Brief for U.S. Patent Nos. 5,980,504 and 6,261,311," filed in U.S. District Court for the Western District of Tennessee Western Division on March 26, 2004, 44 pages   |

|  |                 |
|--|-----------------|
| Examiner Signature   | Date Considered |
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |                 |